

Abstract

In a traction roller type reduction gear (3a) disposed in the middle of a passage for transmitting power from a starter motor to the rotating shaft of an engine, a relation $P_{\text{mean}} > \{(U_{\text{max}})^{1/2}\}/9$ or $P_{\text{mean}} > 0.3[\text{GPa}]$ is satisfied, assuming the maximum circumferential speed of a drive side cylindrical surface (42) under use state is U_{max} [m/sec], and the average contact pressure at the radially outer side contact area (50b) of a movable roller (25) based on the preload of a compression coil spring (45) is P_{mean} [Gpa]. According to the arrangement, transmission efficiency is ensured by preventing slip at both radially inner and outer side contact areas (49a, 49b, 50a, 50b) even during light load operation and damage such as seizure can be prevented.